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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,405	03/09/2001	Wolf-Dietrich Weber	02998.P013	5453

7590 02/09/2006

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EXAMINER

SIDDIQI, MOHAMMAD A

ART UNIT	PAPER NUMBER
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2154

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/802,405

Applicant(s)

WEBER ET AL.

Examiner

Mohammad A. Siddiqi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 14-16, 20-27 and 31-34 is/are rejected.
- 7) ☒ Claim(s) 11-13, 17-19, 28-30, and 35-36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/13/05, 3/14/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-36 are presented for examination
2. Applicant's arguments in the Appeal Brief have been found persuasive and therefore the appeal has been withdrawn and prosecution in this application has been reopened. Applicant's submission filed on 11/28/2005 has been entered.

Allowable Subject Matter

3. Claims 11-13, 17-19, 28-30, and 35-36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims *1-10, 14-16, 20-27, and 31-34* are rejected under 35 U.S.C. 102(e) as being anticipated by Wingard et al. (6,182,183) (hereinafter Wingard).

6. As per independent claims 1,14, 20 and 31, Wingard discloses a method for communicating data between functional blocks, computing device (col 2, lines 54-67), comprising:

establishing a thread identifier, for each independent data stream between an initiator functional block and a target functional block (col 3, lines 8-22; col 13, lines 42-55; col 5, lines 45-67; col 6, lines 1-5), wherein a plurality of independent data streams exist between the initiator functional block and the target functional block

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(col 3, lines 8-22; col 13, lines 42-55; col 5, lines 45-67; col 6, lines 1-5);

if the target functional block is unable to accept a data transfer from the initiator functional block (col 8, lines 39-65; col 13, lines 43-67), the target functional block issuing a busy signal identified by the thread identifier (col 8, lines 39-65; col 13, lines 43-67);

the initiator functional block withholding issuance of data transfers associated with the thread identifier in response to the issued busy signal (col 13, lines 42-67; col 9, lines 46-67; col 10, lines 1-12), wherein data transfers not associated with the thread identifier identified by the issued busy signal may be issued (col 13, lines 42-67; col 9, lines 46-67; col 10, lines 1-12); and

mapping a data flow from the initiator functional block to the target functional block (col 14, lines 54-67) to a thread indicated by the thread identifier to meet a service guarantee on a per thread identifier basis (col 8, lines 39-65; col 11, lines 45-64).

7. As per independent claims 2, and 21, Wingard discloses the busy signal comprises a signal that is maintained active when the target functional block is unable to accept data transfers (col 13, lines 55-67).

8. As per claims 3 and 22, Wingard discloses teach the busy signal comprises a credit signal used to communicate a number of credits that indicate how many data transfers the target functional block can accept (col 13, lines 55-67; col 14, lines 1-17).

9. As per claims 4 and 23, Wingard discloses decrementing the number of credits for each active data transfer and incrementing the number of credits upon freeing up of resources for further data transfers (col 13, lines 1-24, In a credit-based mechanism, the slave informs the master how many or approximately how many transfers it can accept).

10. As per claims 5 and 24, Wingard discloses credit signal is generated by maintaining the signal in an active state for a number of clock cycles corresponding to the number of credits (col 13, lines 19-23).

11. As per claims 6 and 25, Wingard discloses the credit signal comprises a coded signal comprises a multi-bit coded signal indicative of the number of credits (multibit signal allow individual commands to be associated, col 13, lines 24-35).

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12. As per claims 7 and 26, Wingard discloses determining service guarantees for at least one transaction stream between initiator functional blocks and the target functional blocks (col 8, lines 55-65).

13. As per claims 8, 16, and 33 Wingard discloses the initiator functional block stopping to send data transfers so that the target functional block receives no more than a determined number of data transfers after issuance of the busy signal (col 9, lines 46-67, col 10, lines 1-47).

14. As per claims 9, 15, 27 and 32, Wingard discloses the target functional block issues a busy signal no more than a determined number of clock cycles after the target functional block determines that it has insufficient buffer space to receive data transfers from an initiator functional block (col 9, lines 46-67, col 10, lines 1-47; col 10, lines 35-67).

15. As per claim 10, Wingard discloses the target device buffering the data transfers received after issuance of the busy signal until resources become available to service the buffered data transfers (col 10, lines 35-67).

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent 5,850,395 guarantee QOS for each virtual channel.

U.S. Patent 6,330,225 teaches quality of service guarantees for different data flows

U.S. Patent 6,145,062 teaches Selective conflict write flush.

U.S. Patent 5,948,089

U.S. Patent 6,477,562 teaches prioritized scheduling for multi-streaming

U.S. Patent 5,999,963 teaches multi tasking

Migrating Sockets- End System Support for Networking with Quality of Service Guarantees By David K. Y. Yau, IEEE/ACM Transaction on networking, Vol 6, NO 6 December 1998.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad A. Siddiqi whose telephone number is (571) 272-3976. The examiner can normally be reached on Monday -Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A. Follansbee can be

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reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MAS


JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
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